

Department of Commerce • National Oceanic & Atmospheric Administration • National Weather Service

***NATIONAL WEATHER SERVICE CENTRAL REGION SUPPLEMENT 05-2003
APPLICABLE TO 10-1603
November 29, 2004
Operations and Services
Performances NWSPD 10-16
Significant Event Report NWSI 10-1603
Special Reports***

NOTICE: This publication is available at: <http://www.nws.noaa.gov/directives/>.

OPR: W/CR1x12 (D. Bloom)
Type of Issuance: Routine

Certified by: W/CR1 (M. Looney)

SUMMARY OF REVISIONS: This Supplement replaces National Weather Service Central Region Supplement 05-2003 and policy memo "Notification Procedures for AMBER Alerts and Service Backup" dated October 17, 2003.

1. Facilities System Failure table has been changed.
2. Personnel phone numbers used in the text have been moved to the Intranet for security reasons.
3. The meteorological support section has been divided into two sections: one for non-weather related disaster events and the other for non weather related communication emergency events.
4. Use of the Security Incident Report has been added.
5. Use of the Unscheduled Outage System (USOS) report has been added.
6. Legal section has been renamed to High Impact.
7. New procedures for Amber Alerts have been added.
8. A new section for extended hours of operations at an RFC has been added.
9. In Appendix A, The guidelines for the "For The Record" memo (FTR) have been changed and the examples have been reformatted.
10. FTR forms and instructions have been moved to the Intranet

(Signed by)

November 17, 2004

Dennis H. McCarthy
Director, Central Region

Date

Special Reports

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1. **Introduction.** This supplement covers procedures to be used by Central Region Weather Forecast Offices (WFOs), River Forecast Centers (RFCs), and Center Weather Service Units (CWSUs); collectively referred to as field offices. This supplement covers procedures for field offices to report significant weather, hydrologic, and other specified events to Central Region Headquarters (CRH).

For many events, calls are made to an answering service who will in turn call an appropriate person at CRH. This answering service listens for three terms “Services”, “Equipment”, and “Aircraft Accident.” From this term, they decide who to contact at CRH. Other sections of this supplement define which term a field office will use for a particular event.

The Awareness Branch of National Weather Service (NWS) Headquarters must brief senior officials in the National Oceanic and Atmospheric Administration (NOAA) and the NWS concerning significant events which occurred overnight. On Mondays, the NWS Awareness Branch briefs these officials about significant events which occurred during the past weekend. Since the NWS Awareness Branch needs this information no later than 5 a.m. Central Time,

WFOs must report significant event information by 4 a.m. Central Time. The most critical information includes the following:

- a. Amount of snow/ice/precipitation
- b. Number of tornadoes
- c. Warning lead times
- d. Number of fatalities
- e. Number of injuries
- f. Significant damage or impact, and
- g. Number of watches and warnings.

The computer program, PANDA, can be used for tornado, severe thunderstorm, and flash flood warnings and lead times. Qualitative estimates for injuries are acceptable if exact numbers are unknown.

2. **Amber Alert**. After an Amber Alert has been disseminated, Weather Service Headquarters needs certain information concerning the dissemination of the Amber Alert. For almost all Amber Alerts, a call to CRH is not necessary. Use the electronic form on the Intranet for Amber Alerts. Guidelines for the report can be found in the comments on this form. When this form is submitted, it will automatically be sent to: cr.sig.ops@noaa.gov, which will notify appropriate CRH personnel. If severe weather is ongoing or develops, the WFO should complete this form after severe weather ends.

When more than one WFO is involved in the dissemination of an Amber Alert, only one report needs to be sent to CRH. Submission of the report is the responsibility of the WFO from whose area the Amber Alert originated. However, WFOs may decide among themselves who will collect the needed information and send the report to CRH. It is the responsibility of each WFO involved in the Amber Alert to furnish information to the WFO preparing the report to CRH. This task may be accomplished either a phone call or e-mail.

In very rare instances, a phone call to CRH will be necessary. One of these rare occasions is when the Amber Alert is for a famous child or is the daughter or son of someone famous. Another of these rare occasions would be when the national news media gives significant attention to a particular Amber Alert. For these rare occasions, senior government officials may ask questions of NOAA and the NWS concerning the Amber Alert. In these rare cases, do the following:

- a. Notify CRH through the answering service: **888-303-0532**.
- b. Request page for: **SERVICES**.
- c. Provide the answering service with the office's name and call-back phone number. The answering service will contact an appropriate person at CRH.
- d. Provide information CRH contact requests. This may include:
 - (1) Name of missing child
 - (2) Name of famous parent
 - (3) Known facts how the child became missing
 - (4) NWS role in disseminating Amber Alert
 - (5) Which national media has given this Amber Alert attention

3. **Aircraft Accident.** Aviation events include any aircraft accident involving one or more of the following:

- Fatalities
- Weather is a known or suspected factor
- An air carrier involved (Flights are classified as air carrier if they involve the transport of passenger and/or freight for hire.)
- A well-known person on board (e.g., government official; movie, television, or media celebrity)
- Missing aircraft

3.1 **Instructions For CWSUs.** For events meeting the criteria in section 3 of this supplement, CWSUs will contact the appropriate WFO as soon as possible, once preliminary facts are known. Use local National Weather Service (NWS) county warning area map as a guideline. CWSUs will establish a person to person contact. Due to the urgency of the situation, a voice mail contact or an e-mail contact is not acceptable. The WFO will contact CRH per instructions in section 3.2 of this supplement.

3.2 **Instructions For WFOs.** For events meeting the criteria in section 3 of this supplement, WFOs will make initial contact with CRH as soon as possible, once preliminary facts are known. Initiate a phone call as soon as the situation allows - any time, 24 hours a day, and seven days a week. Do not delay the call for further investigation once the basic facts are known. If there is any doubt as to whether or not contact with CRH should be made for an event, initiate a call. Do the following:

- a. Notify CRH through the answering service: **888-303-0532.**
- b. Request page for: **AIRCRAFT ACCIDENT.**
- c. Provide the answering service with the office's name and call-back phone number. The answering service will contact an appropriate person at CRH.
- d. Provide information CRH contact requests. This may include:
 - (1) Type of aircraft
 - (2) Time of accident
 - (3) Location of accident
 - (4) Fatalities
 - (5) Injuries
 - (6) Extent of damage
 - (7) Media coverage
 - (8) Did terminal aerodrome forecast (TAF) and/or flight advisories reflect conditions at time of accident?

- e. Issue a Notification Report (commonly known as OAV) according to instructions in NWSI 10-2004, Section 3.2

4. **Extended Hours of Operations at a River Forecast Center (RFC)**. When an RFC located in Central Region goes to extended hours of operations, the RFC will notify CRH. Do the following:

- a. Notify CRH through the answering service: **888-303-0532**.
- b. Request page for: **SERVICES**.
- c. Provide the answering service with the office's name and call-back phone number. The answering service will contact an appropriate person at CRH.
- d. Provide information CRH contact requests. This may include:
 - (1) When did or will the RFC go to extended hours of operations
 - (2) What event(s) prompted the RFC to go to extended hours of operations?

When normal hours are resumed, the RFC will notify CRH during normal business hours through an e-mail to: cr.sig.ops@noaa.gov.

5. **Facilities Systems Failure**. For a facility system failure, field offices should use Table 1 as a guideline:

For facilities systems failures in the left side of Table 1, do the following:

- a. Notify CRH through the answering service: **888-303-0532**
- b. Request page for: **EQUIPMENT**.
- c. Provide the answering service with the office's name and call-back phone number. The answering service will contact an appropriate person at CRH.
- d. Provide information CRH contact requests. This may includes:
 - (1) What part of the facility system failed and why is this a hazard to public safety

For facilities systems failures in the right side of the preceding table, field offices will only need to send an e-mail to: cr.sig.ops@noaa.gov by 7:00 a.m. CST or CDT the next business day.

TABLE 1
FACILITIES SYSTEMS FAILURE EVENTS

REPORT IMMEDIATELY THROUGH ANSWERING SERVICE	REPORT THROUGH AN E-MAIL BY NEXT BUSINESS DAY
Failure of electrical systems resulting in complete loss of power and/or equipment failure during weather or hydrologic conditions that would pose a threat to public safety.	Failure of electrical systems that does not pose a threat to public safety
Heating, Ventilation, and Air Conditioning (HVAC) fails without backup system operating and is a threat to public safety	Heating, Ventilation, and Air Conditioning (HVAC) fails without backup system operating and is expected to continue for more than 24 hours.
Other Facilities System related failures that could pose a threat to public safety.	

6. **Fire Weather**. Wildfire weather events include wildfires, which result in one or more of the following:

- One or more directly related fatalities
- Numerous injuries
- Major property damage
- Significant media attention

For events meeting the above criteria, initial contact with CRH will be made as soon as possible, once preliminary facts are known. Initiate a phone call as soon as the situation allows - any time, 24 hours a day, and 7 days a week. Do not delay the call for further investigation once some basic facts are known. If there is any doubt as to whether or not contact with CRH should be made for an event, initiate a call. Do the following:

- a. Notify CRH through the answering service: **888-303-0532**.
- b. Request page for: **SERVICES**.
- c. Provide the answering service with the office's name and call-back phone number. The answering service will contact an appropriate person at CRH.
- d. Provide information CRH contact requests. This may include:
 - (1) For a wildfire:
 - (2) Time wildfire began, if known

- (3) Location of wildfire
 - (4) Acreage burned, if known, and valid time of this information
 - (5) Percent contained, if known, and valid time of this information
 - (6) Deaths
 - (7) Injuries
 - (8) Damage
 - (9) Media coverage
 - (10) Warning or other product in effect
- e. Issue a “For The Record” memo (FTR) if CRH contact decides this course of action. Use electronic form for wildfires on the Intranet. Guidelines for the FTR can be found on this form and in Appendix A, section 1.

7. **Fire Weather Incident Meteorologist (IMET) Deployment Notification.** Contact CRH upon any request to deploy an IMET. Contact with CRH for deployment of an IMET can wait until daytime or early evening hours. During these hours, do the following:

- a. Notify CRH through the answering service: **888-303-0532**.
- b. Request page for: **SERVICES**.
- c. Provide the answering service with the office’s name and call-back phone number. The answering service will contact an appropriate person at CRH.
- d. Provide information CRH contact requests. This may include:
 - (1) Name of IMET being deployed
 - (2) Wildfire to which IMET is being deployed
 - (3) From which field office is IMET being deployed
 - (4) Times IMET scheduled to leave the field office and report to wildfire site

8. **High Impact.** High impact events include the following or similar events:

- Congressional or other government contacts
- Known or suspected work related court subpoenas of field office personnel
- Employee fatality(ies) and/or serious injury(ies) occurring in the line of duty
- Fatality(ies) and/or serious injury(ies) occurring on a National Weather Service (NWS) site
- Significant damage to NWS facility;
- Emergency field office closure/reopening

Field offices will notify CRH for high impact events as soon as possible. Do the following:

- a. Establish a person to person contact. Due to the urgency of the situation, a voice mail contact or an e-mail contact is not acceptable. Go to Emergency Reporting

Section on the Intranet and click on “Contact for High Impact Events” for contact information.

- b. Provide information CRH contact requests. This may include for:
- (1) Congressional contacts
 - (a) Name of government office contacting field office
 - (b) Information this government office desired
 - (c) Time of this inquiry
 - (d) Information given to this government office
 - (e) Subsequent actions taken by field office
 - (2) Subpoenas
 - (a) Person(s) subpoenaed from field office
 - (b) Person or agency issuing the subpoena
 - (c) Information for which field office person subpoenaed to testify
 - (d) Subsequent actions taken by field office
 - (3) Fatality or serious injury
 - (a) Name of person(s) fatally or seriously injured
 - (b) Medical services provided, if any
 - (c) Employee or visitor to NWS site
 - (d) Circumstances of fatal or serious injury
 - (e) Time and location of occurrence
 - (f) Subsequent actions taken by field office
 - (4) Damage to NWS facility
 - (a) Damage that occurred
 - (b) Time of damage
 - (c) Location of damage
 - (d) Subsequent actions taken by field office
 - (5) Emergency closure/reopening
 - (a) Reason for emergency closure
 - (b) Health or safety of people affected
 - (c) Damage to NWS property
 - (d) Subsequent actions taken by field offices

9. **Marine.** Marine events include the following or similar events on the Great Lakes:

- Major commercial or major private boat accidents
- Any marine accident which is, or may be, weather related
- Any time a field office becomes aware of a missing marine vessel where weather is, or may be, a factor
- Strong winds
- Seiches
- Shore flooding
- Excessive wave action
- Ice jams

For any of these Marine events resulting in one or more of the following, field offices will contact CRH:

- One or more directly related fatalities
- Numerous injuries
- Major property damage
- Significant media attention

For events meeting the above criteria, initial contact with CRH will be made as soon as possible, once preliminary facts are known. Initiate a phone call as soon as the situation allows - any time, 24 hours a day, and 7 days a week. Do not delay the call for further investigation once the basic facts are known. If there is any doubt as to whether or not contact with CRH should be made for an event, initiate a call. Do the following:

- a. Notify CRH through the answering service: **888-303-0532**.
- b. Request page for: **SERVICES**.
- c. Provide the answering service with the office's name and call-back phone number. The answering service will contact an appropriate person at CRH.
- d. Provide information CRH contact requests. This may include:
 - (1) Type of event
 - (2) Time of event
 - (3) Location of event
 - (4) Deaths
 - (5) Injuries
 - (6) Damage
 - (7) Media coverage
 - (8) Warning, advisory, or other product in effect
 - (9) Lead time on warning or advisory (Lead time is the time between the issuance time of the warning or advisory and the time warning or advisory criteria is first met.)
- e. Issue a Notification Report if CRH contact decides this course of action. Follow instructions in NWSI 10-2004, Section 4.

10. **Meteorological Support for Non Weather Related Disaster Events**. Meteorological support for non weather caused disaster events include the following or similar events:

- Meteorological support in forecasting for toxic gas, oil, or radioactive material spills
- Nuclear accidents
- Terrorist acts

For events meeting the above criteria, initial contact with CRH will be made as soon as possible, once preliminary facts are known. Initiate a phone call as soon as the situation allows - any time, 24 hours a day, and 7 days a week. Do not delay the call for further investigation once the basic facts are known. If there is any doubt as to whether or not contact with CRH should be made for an event, initiate a call. Do the following:

- a. Notify CRH through the answering service: **888-303-0532**.
- b. Request page for: **SERVICES**.
- c. Provide the answering service with the office's name and call-back phone number. The answering service will contact an appropriate person at CRH.
- d. Provide information CRH contact requests. This may include:
 - (1) Type of event for which meteorological support was requested
 - (2) Time of event
 - (3) Location of event
 - (4) Local, state, or federal agency requesting meteorological services
 - (5) Type of information requested
 - (6) Information given
 - (7) Special models run/special products issued to provide meteorological support.
 - (8) Deaths from the event for which meteorological support was requested
 - (9) Injuries from the event for which meteorological support was requested
 - (10) Damage from the event for which meteorological support was requested
 - (11) Media coverage from the event for which meteorological support was requested
- e. Issue a "For The Record" memo (FTR) if CRH contact decides this course of action. Use electronic form for hazmat on the Intranet. Guidelines for the FTR can be found on this form and in Appendix A, section 1.

11. **Security Compromise**. Security compromise includes the following or similar events:

- Break-ins to facilities or government vehicles
- Attempted break-ins to facilities or government vehicles
- Physical threat to government personnel, facilities, or government vehicles.

Contact CRH for Security Compromise Events as soon as possible. Do the following:

- a. Establish a person to person contact. Due to the urgency of the situation, a voice mail contact, or an e-mail contact, is not acceptable. Go to Emergency Reporting Section on the Intranet and click on "Security Compromise Contacts" for contact information.
- b. Provide information CRH contact requests. This may includes:
 - (1) Type of security compromise (break-in; attempted break-in; physical threat to government personnel, facility or vehicle)
 - (2) Time security compromise occurred

- (3) Location of security compromise
 - (4) Fatalities
 - (5) Injuries
 - (6) Damage
 - (7) Event ongoing or ended
 - (8) Subsequent actions taken by field office
- c. Meteorologist In Charge, or Acting Meteorologist In Charge, of the field office will file a Security Incident Report. Go to Emergency Reporting Section on the Intranet and click on "Security Incident Report Guidelines" for more information.

12. **Service Backup.** For most service backup situations, a telephone call to CRH is not necessary. A brief e-mail to: cr.sig.ops@noaa.gov explaining the situation will be sufficient.

In rare incidents, a high priority service backup may be needed due to an unexpected event, such as those covered in other sections of this supplement. These events, by themselves, would require CRH be notified. In these rare incidents, initiate a call as soon as possible. Do the following:

- a. Notify CRH through the answering service: **888-303-0532**.
- b. Request page for: **SERVICES**.
- c. Provide the answering service with the office's name and call-back phone number. The answering service will contact an appropriate person at CRH.
- d. Provide information CRH contact requests. This may includes:
 - (1) Name(s) of field offices doing backup
 - (2) Name of field office needing backup
 - (3) Reason back-up operations required
 - (4) Time back-up operations initiated
 - (5) Time normal operations resumed, if applicable
 - (6) Problems created by going to back-up operations

13. **System Outage.** System outages will be reported using Table 2 as a guideline.

If system outage is an emergency (center column), do the following:

- a. Notify CRH through the answering service: **888-303-0532**
- b. Request page for: **EQUIPMENT**.
- c. Provide the answering service with the office's name and call-back phone number. The answering service will contact an appropriate person at CRH.
- d. Provide information CRH contact requests. This may include:

- (1) Name of failed system, or part of system
- (2) Effect on operations
- e. Send an e-mail addressed to: cr.sig.ops@noaa.gov .
- f. Issue an Unscheduled Outage System (USOS) report through the EMRS portal by 9 a.m. the following business day

If the system outage is not an emergency (right column in Table 2), fill out an Unscheduled Outage System (USOS) report through the EMRS portal by 9 a.m. the following business day.

Table 2
SYSTEM OUTAGE EVENT TABLE

<u>System Name</u>	<u>Emergency - File Incident Memo and Report Immediately if:</u>	<u>Non-Emergency Report by 9 a.m. in USOS if:</u>
AWIPS	AWIPS failure results in service backup with <u>public safety impact</u> ; or RFC AWIPS outage with <u>public safety impact</u>	AWIPS failure results in service backup with <u>no public safety impact</u> ; or RFC AWIPS outage greater than 6 hours with <u>no public safety impact</u>
WSR-88D Radar	Total loss of radar (RDA or RPG) during weather or hydrologic conditions that <u>threaten public safety</u>	Total loss of radar (RDA or RPG) for more than 12 hours with <u>no public safety impact</u>
NOAA Weather Radio	Total loss of broadcast services during weather or hydrologic conditions that <u>threaten public safety</u>	Total loss of broadcast services for more than 12 hours with <u>no public safety impact</u>
Field offices/RFC Voice Telecommunications	Total loss of voice telephone lines during weather or hydrologic conditions that <u>threaten public safety</u> .	Total loss of voice telephone lines for more than 12 hours with <u>no public safety impact</u>
Regional Frame Relay Communications	Total loss of Regional Frame Relay connectivity during weather or Hydrologic conditions that <u>threaten public safety</u>	Total loss of Regional Frame Relay connectivity for more than 12 hours with <u>no public safety impact</u>
Upper Air Equipment	No immediate reports required	Failure of Upper Air equipment resulting in loss of upper air observations for more than 12 hours
ASOS	No immediate reports required	Failure of an ASOS system component and redundant backup components, resulting in a loss of observational data and which will exceed established restoration time

14. **Weather/Hydrologic.** Weather/Hydrologic events include the following or similar events:

- Severe thunderstorms
- Tornadoes
- High winds
- Winter weather
- Floods
- Heat episodes (5 or more fatalities)
- Lightning (3 or more fatalities)
- Avalanches
- Large scale air stagnation episode resulting in one or more fatalities

For weather/hydrologic events which result in one or more of the following, contact CRH

- One or more directly related fatalities
- Numerous injuries
- Major property damage
- Significant media attention

For events meeting the above criteria, initial contact with CRH will be made as soon as possible, once preliminary facts are known. Initiate a phone call as soon as the situation allows - any time, 24 hours a day, and 7 days a week. Do not delay the call for further investigation once the basic facts are known. If there is any doubt as to whether or not contact with CRH should be made for an event, initiate a call. Do the following:

- a. Notify CRH through the answering service: **888-303-0532**.
- b. Request page for: **SERVICES**.
- c. Provide the answering service with the office's name and call-back phone number. The answering service will contact an appropriate person at CRH.
- d. Provide information CRH contact requests. This may include:
 1. Type of event
 2. Time and location of event
 3. Deaths
 4. Injuries
 5. Damage
 6. Media coverage
 7. Warning or other product in effect
 8. Lead time on warning or advisory (Lead time is the time between the issuance time of the warning or advisory and the time warning or advisory criteria is first met.)

9. Amount of snow/ice/rainfall
10. Number of tornadoes
11. Number of watches or warnings issued

- b. Issue a "For The Record" memo (FTR) if CRH contact decides this course of action. Use electronic form on the Intranet for the appropriate event. Guidelines for the FTR can be found on this form and in Appendix A, section 1.

15. **WFO Support for Nonweather Related Communication Emergency Events.**

Meteorological support for non weather related communication emergency events includes the following or similar events:

- Anytime a field office is requested to disseminate a nonweather related emergency message as listed in NWSI 10-518, Appendix C, over the NOAA All Hazards Radio (NWR) or other communication system for local, state or other federal agency.

For events meeting the above criteria, a phone call to CRH is not necessary. A brief e-mail to cr.sig.ops@noaa.gov explaining the situation will be sufficient. When more than one field office is involved in the meteorological services communication dissemination event, only one field office needs to send an e-mail. Field offices may decide among themselves who will e-mail CRH. Other field offices involved should be carbon copied on the e-mail. In the e-mail include the following:

- a. What type of message was asked to be disseminated.
- b. On which NWS communication channels was this message disseminated
- c. Date and time of request
- d. Agency requesting message dissemination
- e. Time message was disseminated
- f. Field offices involved

Field office may attach a copy of the message to the e-mail if this can be easily accomplished.

APPENDIX A - “FOR THE RECORD” (FTR) REPORTING GUIDELINES

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1. **“For the Record” (FTR) Memo General Instructions**

Use the appropriate template for the proper hazard provided on the Central Region Intranet. Comments in the templates contain instructions on what information is needed. Use of other software to create the FTR often changes the format and can cause significant delays in sending the FTR to NWS Headquarters.

Any acronyms used in the FTR, except for widely known ones such as NWS, WSR-88D, and AWIPS; must be defined. In the first use, spell out the meaning of the acronym followed by the acronym itself in parentheses. Once defined the acronym may be used as often as needed.

Times should be written as per the example in NWSI 10-1603, section 3.3 on page 7 (e.g., 5:10 a.m. EST, 6 p.m. MST). The time zone is only required on the first time reference in the FTR.

Date of event is required in the subject section. Use other references to date or day of week as necessary to clarify text.

Since the FTR Memo is sent to a large number of people inside, and possibly outside, NOAA and the NWS, refrain from including personal opinions or editorial comments. Simply state the facts. Personal opinions and editorial comments, no matter how well intentioned, may be misinterpreted and should be avoided. These types of comments can be forwarded to the appropriate CRH program persons through normal channels.

When it becomes necessary to update a FTR Memo, start with the latest version CRH has sent to NWS Headquarters. This version will be archived on the Intranet. If the latest version is not used as the base for an update, previous information added or changes made to the FTR Memo at CRH may be lost. The CRH person contacted for the updated FTR Memo may not be the same CRH person who was contacted for the original or previous version. Use of other versions as a base for an update can cause significant delays. The field office may adjust information in the updated FTR Memo as new information indicates.

2. **Example 1- Severe Thunderstorm**

DATE: 06/13/02

MEMORANDUM FOR: The Record

FROM: WFO Hastings Nebraska - Clyde Short, Senior Forecaster

SUBJECT: Damaging Hail Storm in Buffalo County, Nebraska - 06/12/02

EVENT: A supercell thunderstorm, moving southeast across the Buffalo County, produced softball size hail in Kearney and Riverdale, as well as in rural locations between 8:00 p.m. and 9:30 p.m. CDT.

LOCATION: Kearney and Riverdale, Buffalo County, Nebraska

OFFICE: WFO Hastings Nebraska

DEATHS: None reported

INJURIES: 2

DAMAGE: Extensive damage in Kearney and Riverdale. Extensive damage to windows and siding on north side of structures. Many vehicle windshields and windows damaged. One sheriff's vehicle destroyed, and another damaged. No dollar amount estimated yet.

OUTLOOKS: Storm Prediction Center (SPC) included Buffalo County in the slight risk area for Day 1.

Hazardous Weather Outlook (HWO) issued at 5:13 a.m. 06/12/02 indicated severe thunderstorms may develop in the afternoon and evening. This HWO mentioned that the greatest hazard would be large hail and damaging winds.

WATCHES: Tornado watch issued at 3:57 p.m. 06/12/02 valid until 9:00 p.m.

WARNINGS: Severe Thunderstorm warning issued at 7:56 p.m. Lead time 9 minutes. Tornado Warning issued at 8:14 p.m. valid until 9:15 p.m. Warning not verified with a tornado report.

SERVICE: One follow up statement issued at 8:29 p.m. and another follow-up statement issued at 8:51 p.m. Path casts in both warnings and follow-up statements included Kearney and Riverdale

SYSTEMS: Just before storm entered Buffalo County, there was a brief problem with AWIPS radar process, which stopped the ingest of radar data for about 15 minutes. WSR-88D data from North Platte (KLNX) was used to initiate first warning.

USER RESPONSE: Sirens were blown for each town as storm approached. Spotters were in place to view storm. Emergency Manager from Buffalo County was very pleased with the lead time for the storm.

Any information listed pertaining to these events and/or lead times associated with watches and warnings are based on the best information available at the time this preliminary report was prepared. Subsequently, these data may be changed as time permits a more thorough investigation of the circumstances surrounding this evening.

3. **Example 2 - Tornado Outbreak**

09/20/02

MEMORANDUM FOR: The Record

FROM: WFO Indianapolis, Indiana - Jason Goodfellow, Meteorologist In Charge

SUBJECT: Tornado Outbreak - Indiana - 09/20/02

EVENT: Supercell thunderstorms, embedded in a large line of thunderstorms, which moved across the Indianapolis forecast area late Friday morning and afternoon, produced several tornadoes. Initial reports indicate damage in 10 counties.

LOCATION: Knox, Owen, Monroe, Morgan, Johnson, Marion, Hancock, Lawrence, Brown, Madison, Delaware, Henry, and Rush Counties Indiana

OFFICE: WFO Indianapolis, Indiana

DEATHS: None reported at this time

INJURIES: Greater than 50. Exact number unknown at this time

DAMAGE: Extensive. One law enforcement vehicle and one barn destroyed. Many structures, including at least 15 houses and one shopping mall, damaged. Numerous trees and power lines down.

OUTLOOKS: Storm Prediction Center (SPC) included the Indianapolis forecast area in the slight risk area on the Day 1 outlook issued 1:24 a.m. EST. Subsequent outlooks

Hazardous Weather Outlook (HWO) issued at 5:59 a.m. Thursday 09/19/02 indicated severe thunderstorms would be possible on Friday.

WATCHES: Tornado Watch #693 - issued at 11:30 a.m. - valid until 5:00 p.m.
Tornado Watch #695 - issued at 12:35 p.m. - valid until 6:00 p.m.

WARNINGS: 12 Tornado and 2 Severe Thunderstorm Warnings issued. Initial warning (Tornado) issued at 11:28 a.m. valid until 12:15 p.m. Lead time 22 minutes. Average lead time for warnings was 19.7 minutes.

SERVICE: Counties for all tornadoes and damage reported had warnings in effect with lead time. Numerous Severe Weather Statements issued. Numerous Local Storm Reports issued in real time

SYSTEMS: An AWIPS console hung and had to be restarted with minimal impact on operations.

USER RESPONSE: Indianapolis media are in continuous coverage. Many telephone interviews have been conducted by office staff. Staff members will conduct a flyover with Indiana State Emergency Management Saturday morning.

Any information listed pertaining to this event and/or lead times associated with watches and warnings are based on the best information available at the time this preliminary report was prepared. Subsequently, these may be changed as time permits a more thorough investigation of the circumstances surrounding this event.

4. **Example 3 - Flash Flood**

04/17/02

MEMORANDUM FOR: The Record

FROM: WFO Marquette, Michigan – Amy Fernandez, Meteorologist In Charge

SUBJECT: Small stream flooding, partial dam failure, potential for complete dam failure, in western Upper Michigan - 04/12-17/02 (continuing at time of this memo)

EVENT: Record snowfall followed by heavy rains and record warmth, resulted in flooding along many streams and rivers across western Upper Michigan. Temperatures in the 70s and 80s since Sunday 04/14/02 melted the remnants of a snowpack 200 to 300 inches thick. Remnants amounted to as much as 12 inches water equivalent. These warm temperatures followed 1 to 3 inches of rain, which fell late last week, sending streams and rivers out of their banks.

In Gogebic county, high water caused a partial failure of the Wood Bire-Presque Isle Dam on the Presque Isle River upstream of Marenisco. Water was also overflowing the dam on Sunday Lake near Wakefield, and authorities were concerned about the possible failure of the McDonald Creek Dam on McDonald Creek upstream of Ramsay, which is west of Wakefield.

Flooding was occurring in Wakefield. Near Marenisco, U.S. Highway 2 and state highway M-64 were closed due to high water. Near Wakefield, U.S. Highway 2 and state highway M-28 were closed due to high water. In Ironwood, all 4 bridges across the Montreal River to Hurley, Wisconsin were closed including U.S. Highway 2. Many secondary roads, gravel roads and forest roads are flooded and closed across Gogebic County in western Upper Michigan.

LOCATION: Gogebic, Ontonagon, Houghton, Baraga, Marquette and Iron counties in western Upper Michigan.

OFFICE: WFO Marquette, Michigan (MQT)
North Central River Forecast Center (NCRFC)

DEATHS: None known at this time.

INJURIES: None known at this time.

DAMAGE: Estimated 40-50 homes partially flooded in Gogebic County.

OUTLOOKS: Hydrologic Outlook issued Tuesday 04/09/02, valid Wednesday, 04/10/02, through Tuesday, 04/16/02, forecast heavy rain followed by unseasonable warmth to accelerate snow melt.

Hazardous Weather Outlook issued Tuesday morning 04/09/02 first identified the possibility of heavy rain in western Upper Michigan along with the potential for warmer temperatures and the consequential rapid snow melt.

WATCHES: Flood Watch for potential dam failure on Presque Isle River near Marenisco issued 9:23 a.m. EDT 04/17/02 valid until 3:00 p.m.

WARNINGS: The first flood warning was issued at 10:38 a.m. and continues in effect. There was zero lead time on this warning. A total of 7 flood warnings have been issued. Average lead time for these 7 warnings is around 16 hours.

SERVICE: Small stream flood advisories for the Presque Isle River were issued as early as 9:33 p.m. 04/14/02.

NCRFC made adjustments to river model data based on higher values from river gage observations.

SYSTEMS: All systems functioned normally during the event.

USER RESPONSE: Evacuations took place in Marenisco, Wakefield and Ironwood (all in Gogebic County).

Sandbagging is taking place along rivers where flooding is occurring and many buildings are impacted.

There was frequent coordination with Gogebic County Emergency management and law enforcement authorities.

Any information listed pertaining to this event and/or lead times associated with watches and warnings are based on the best information available at the time this preliminary report was prepared. Subsequently, these may be changed as time permits a more thorough investigation of the circumstances surrounding this event.

5. **Example 4 - Wildfire**

06/09/02

MEMORANDUM FOR: The Record

FROM: WFO Grand Junction, Colorado - Herbert Long, Meteorologist In Charge

SUBJECT: Coal Seam Wildfire near Glenwood Springs, Colorado 06/08-09/02

EVENT: Wildfire burning south of Interstate 70 near Glenwood Springs, Colorado exploded in size and intensity late Saturday afternoon 06/08/02. The fire jumped the Colorado River and Interstate 70 and is now threatening the town of Glenwood Springs. The fire was ignited by an old coal seam, which has been burning underground for the past 50 years. The fire is burning out of control in heavy oak brush.

LOCATION: Glenwood Springs, Garfield County, Colorado

OFFICE: WFO Grand Junction, Colorado

DEATHS: None known at this time.

INJURIES: None known at this time.

DAMAGE: As of early Sunday afternoon, the fire had consumed over 7000 acres and had destroyed 40 structures, including 24 homes. No estimate on monetary damages at this time.

OUTLOOKS: The critical fire weather area from the Storm Prediction Center for Day 1 issued Saturday included the Glenwood Springs area.

WATCHES: Fire Weather Watch issued 2:33 p.m. MDT, Thursday 06/06/02, valid for all of eastern Utah and western Colorado for Saturday.

WARNINGS: Red Flag Warning for all of eastern Utah and western Colorado issued at 3:00 p.m., Friday 06/07/02, valid from 11:00 a.m. Saturday through 10:00 p.m. Sunday. Lead time 20 hours.

SERVICE: Wind Advisory issued for Colorado zones 7 and 8 at 10:20 a.m., Saturday, for 25 to 35mph winds with gusts to 45 mph.

Coordination calls with land management agencies on Wednesday, 06/05/02, for expected fire weather hazards over the weekend.

Numerous telephone briefings with land management officials, before and during the event. Provided Fire Weather Spot Forecasts at 10:00 p.m. Saturday and at 1:45 p.m. Sunday.

Incident meteorologist (IMET) from Riverton, Wyoming being dispatched to the fire.

SYSTEMS: No known equipment problems.

WSR-88D detected smoke plume associated with the fire and aided in detecting the fire's origin. Visible satellite imagery displayed smoke plume and direction of wind flow based on plume movement. 3.9 micron imagery helped to approximate the current location of the fire. Model soundings, time sections, and cross sections from AWIPS utilized in making fire weather decisions.

USER RESPONSE: An order was issued to evacuate west Glenwood Springs and several subdivisions. Shelters are being set up for those displaced. Interstate 70 was closed from 6:00 p.m. Saturday until 3:00 p.m. Sunday.

Wildfire has garnered national media attention due, in part, to the close proximity of the South Canyon (also known as Storm King) Wildfire 07/06/94 which accounted for the deaths of 14 smoke jumpers.

Any information listed pertaining to this event and/or lead times associated with watches and warnings are based on the best information available at the time this preliminary report was prepared. Subsequently, these may be changed as time permits a more thorough investigation of the circumstances surrounding this event.

6. **Example 5 - Hazardous Spill**

DATE: 05/28/02

MEMORANDUM FOR: The Record

FROM: WFO Grand Rapids – Erika Brown, Senior Forecaster

SUBJECT: Hazardous Substance Release Event - Eaton County, Michigan – 05/27/02

EVENT: Train derailment at 12:30 p.m. EDT Monday 05/27/02 resulted in a release of propane gas. The derailment occurred within a few yards of a subdivision and mobile home park in Pottersville, Michigan.

LOCATION: Pottersville, Eaton County, Michigan

OFFICE: WFO Grand Rapids, Michigan

REQUESTING AGENCY: Eaton County Dispatch

INFORMATION REQUESTED: The Eaton County dispatch called for local wind information twice between 12:30 p.m. and 2 p.m. The Grand Rapids office was requested to provide wind and precipitation information through Tuesday evening.

INFORMATION GIVEN: Observations from Lansing (LAN) and Charlotte (FPK) and the zone forecast wind information were given them.

DEATHS: None known at this time.

INJURIES: None known at this time.

DAMAGE: Damage to train cars and track. No monetary estimate available at this time.

SYSTEMS: No equipment problems

USER RESPONSE: The town of Pottersville, Michigan (population around 2,200) was evacuated.

National network television news covered the event Tuesday morning. The story was picked up by the Washington Post and other large circulation newspapers in their online editions.

Any information listed pertaining to this event and/or lead times associated with watches and warnings are based on the best information available at the time this preliminary report was prepared. Subsequently, these may be changed as time permits a more thorough investigation of the circumstances surrounding this event.